

What is claimed is:

1. A vent system for a drinking container, the vent system comprising:  
a closure member adapted and configured for coupling to an open top of the drinking container, said closure member including an air passage therethrough to allow the passage of air from outside the container to an interior of the container; and  
a one-way valve sealingly and removably coupled to said closure member and operatively connected to said air passage and extending into said container, for permitting passage of air from outside the container into said interior of the container and preventing flow of liquid from the interior of the container to outside the container through the vent system.
2. The vent system according to claim 1, wherein said closure member includes:  
a central portion having an air passage therethrough; and  
at least one air vent tube with at least one air vent tube opening in a periphery of said closure member, wherein the air vent tube is operationally connected to said air passage such that air may pass into the container through the air tube, through the valve and into the container.
3. The vent system according to claim 1 or claim 2, wherein said closure member is a unitary member.
4. The vent system according to any of the preceding claims, wherein said closure member further comprises at least one liquid opening to allow passage of liquid from the interior of the container through said open top.

5. The vent system according to any of the previous claims, wherein:  
said closure member is formed of a base portion and a disc portion;  
said valve is coupled to said base portion; and  
said base portion and said disc portion are adapted and configured to form at least one air tube therebetween, that allows air to enter the container from a periphery of said closure member through said valve into said container.
6. The vent system according to claim 5, wherein said base portion and said disc portion are adapted and configured to form liquid openings that allow liquid to exit the container.
7. The vent system according to claim 6, wherein said liquid openings are formed by a combination of base liquid openings and disc liquid openings to seal liquids from the air vent tubes.
8. The vent system according to claim 4 or claim 5, wherein said base portion further comprises a plurality of base vent grooves that operationally connect the valve to said vent tube openings, said air vent tubes being formed by placing said disc portion over said base vent grooves.
9. The vent system according to any of the preceding claims, and further comprising an anti-bubble tube extending to nearly a bottom of portion of the container, said anti-bubble tube being releasably coupleable to said closure member and circumscribing said valve, wherein the

anti-bubble tube and the valve trap a volume of air therebetween, so as to create a "diving bell" effect within the anti-bubble tube.

10. The vent system according to claim 9, wherein said anti-bubble tube comprises a heat sensor of a thermally reactive material to indicate a temperature of a liquid in the container.

11. The vent system according to claim 9 or claim 10, wherein said anti-bubble tube has a lower section and an upper section, wherein the upper section generally surrounds the valve, and wherein the lower section has a larger volume than the upper section.

12. The vent system according to any of the preceding claims, wherein said valve is integrally formed with said closure member.

13. The vent system according to claim 5, wherein said valve is integrally formed with said base portion.

14. The vent system according to any of the preceding claims, wherein said valve further includes a connecting portion adapted and configured for sealingly engaging said closure member during use, sufficiently tightly to prevent inadvertent release during use, and for easy removal for cleaning.

15. The vent system according to claim 14, wherein said valve further includes a gripping portion for ease of gripping during removal of said valve from said closure member.

16. A drinking container comprising:

a closure member adapted and configured for coupling to an open top of the drinking container, said closure member including an air passage therethrough to allow the passage of air from outside the container to an interior of the container;

a one-way valve sealingly and removably coupled to said closure member and operatively connected to said air passage and extending into said container, for permitting passage of air from outside the container into said interior of the container and preventing flow of liquid from the interior of the container to outside the container through the vent system;

a liquid outlet member; and

a collar, wherein the collar is threadably connected to the container for sealing the liquid outlet member against the closure member, wherein a threaded region of a neck of the bottle and a threaded region of the collar are adapted and configured to allow air to pass therebetween and enter said air passage.

17. A method for forming a drinking container, the method comprising:

mounting, on the drinking container, a closure member adapted and configured for coupling to an open top of the drinking container, said closure member including an air passage therethrough to allow the passage of air from outside the container to an interior of the container; and

sealingly and removably coupling a one-way valve to said closure member, said valve being operatively connected to said air passage and extending into said container, for permitting passage of air from outside the container into said interior of the container and preventing flow of liquid from the interior of the container to outside the container through the closure member;

so as to form a substantially vacuum-free, non-leak drinking container.

18. The method according to claim 17, wherein said closure member is formed of a base portion and a disc portion and said step of mounting includes:

mounting said disc portion on said base portion; and

mounting said base portion on said drinking container;

wherein said base portion and said disc portion are adapted and configured to form at least one air tube therebetween, that allows air to enter the container from a periphery of said closure member through said valve into said container;

and wherein said step of coupling includes sealingly and removably coupling said valve to said base portion.

19. The method according to claim 18, further comprising:

forming, on said base portion, a plurality of base vent grooves that operationally connect the valve to said vent tube openings; and

forming said air vent tubes by placing said disc portion over said base vent grooves.

20. The method according to any of claims 17 to 19, further comprising mounting an anti-bubble tube on said closure member circumscribing said valve, wherein said anti-bubble tube and said valve trap a volume of air therebetween so as to create a "diving bell" effect within the anti-bubble tube.

21. The method according to claim 20, wherein said anti-bubble tube is adapted and configured, when said container is inverted, to guide air entering the container to an air pocket formed in a bottom portion of the container, wherein the air pocket is created by partially emptying the container.

22. The method according to Claim 20 or claim 21, wherein the anti-bubble tube is adapted and configured to provide passage for air directly to said air pocket, and the air is not allowed to mix with the liquid in the container or create air bubbles in the liquid.